

**1. D.) AMENDMENTS TO THE DRAWINGS**

None.

### **E.) REMARKS**

This Response is filed in response to the Office Action dated September 25, 2006.

Upon entry of this response, claims 1-2, and 4-17 will be pending in the Application.

Dependent claim 6 has been amended to correct a typographical error. No new matter has been entered as support for the correct spelling is found in the Specification.

In the outstanding Office Action, the Examiner rejected claims 1-2 and 4-7 under 35 U.S.C. 103(a) as being unpatentable over McCullough, Jr. et al. (U.S. Patent No. 5,356,707) hereafter "McCullough" in view of Kochman et al. (U.S. Patent No. 5,824,996) hereafter "Kochman"; rejected claims 14-17 under 35 U.S.C. 103(a) as being unpatentable over McCullough in view of Kochman; and rejected claims 8-13 under 35 U.S.C. 103(a) as being unpatentable over Schimpf et al. (U.S. Patent No. 5,098,688) hereafter "Schimpf" in view of Kochman.

#### **Rejections under 35 U.S.C. 103**

##### **A. Claims 1, 2, 4-7**

The Examiner rejected claims 1-2 and 4-7 under 35 U.S.C. 103(a) as being unpatentable over McCullough in view of Kochman.

Specifically, the Examiner stated that

The primary reference teaches the claimed invention including electrically resistant Tow having stretched carbon fibers- col. 8, lines 54-68; col. 10, lines 11-15. Although the Primary reference substantially teaches the claimed invention, it however fails to teach its tow having controlled, predetermined electrical resistance even in changed environment. The secondary reference, however, teaches this aspect. The secondary reference teaches that it is known in the art to have tow material have controlled, predetermined electrical resistance even in changed environments- col. 7, lines 54-65; col. 9, lines 2-9; col. 9, lines 65-67; col. 10, lines 11-18; col. 12, lines 30-32; claims 13 and 26. It would have been obvious to one of ordinary skill in the art at the time the invention is made to combine the teachings of the secondary reference to Kochman et al and utilize such tow imparted with such claimed electrical resistance, in the primary

reference, in the absence of unexpected results motivated by the desire to impart desired properties thereto.

Applicants respectfully traverse the rejection of claims 1-2 and 4-7 under 35 U.S.C. 103(a).

The following principle of law applies to all Section 103 rejections. MPEP 2143.03 provides “To establish prima facie obviousness of a claimed invention, all claim limitations must be taught or suggested by the prior art. In re Royka, 490 F.2d 981, 180 USPQ 580 (CCPA 1974). All words in a claim must be considered in judging the patentability of that claim against the prior art. In re Wilson, 424 F.2d 1382, 1385, 165 USPQ 494, 496 (CCPA 1970).” [emphasis added] That is, to have any expectation of rejecting the claims over a single reference or a combination of references, each limitation must be taught somewhere in the applied prior art. If limitations are not found in any of the applied prior art, the rejection cannot stand. In this case, the applied prior art reference, applied individually, clearly do not arguably teach some limitations of the claims.

Independent claim 1, as amended, recites a tow comprising: a predetermined number of carbon fibers forming a tow; wherein the tow has an alignment angle from 0 to 30 degrees after being subjected to a predetermined stress level while simultaneously being subjected to a first predetermined elevated temperature associated with fabricating the tow, the tow having a controlled, predetermined electrical resistance remaining substantially unchanged in response to changes in environmental conditions. (emphasis added)

Applicant asserts that the combined references fail to render obvious Applicant's claimed invention for at least three clear reasons. First, the combined references fail to teach or suggest at least two of the claimed limitations found in claim 1. Second, the secondary reference to Kochman is non-analogous art to the primary reference McCullough. Third, a combining the secondary reference destroys the teaching of the primary reference.

First, the combined references fail to teach or suggest the claimed limitations found in claim 1 of "wherein the tow has an alignment angle from 0 to 30 degrees after being subjected to a predetermined stress level while simultaneously being subjected to a first predetermined elevated temperature associated with fabricating the tow," and "the tow having a controlled, predetermined electrical resistance remaining substantially unchanged in response to changes in environmental conditions."

McCullough, as understood, is directed to the manufacture of nonlinear fire resistant carbonaceous polymeric fiber or tow or fibers having a reversible deflection of 1.2:1. Processing including crimping the fibers with at least 6 to 15 crimps per inch and then heating the fibers in a relaxed and unstressed condition (col. 8, lines 67-68) to produce a heat induced thermoset reaction.

The Examiner appears to be implying by his citation within the McCullough reference that the crimping and subsequent heating teach or suggest the limitation to "wherein the tow has an alignment angle from 0 to 30 degrees after being subjected to a predetermined stress level while simultaneously being subjected to a first predetermined elevated temperature associated with fabricating the tow,". Applicant disagrees with this interpretation.

McCullough does not teach or suggest that his tow has an alignment angle from 0 to 30 degrees. The Examiner points to col. 8, lines 54-68 and col. 10, lines 11-15 of McCullough to attempt to disclose fiber orientation. However, these sections only disclose fiber formation characteristics, and have no relevance to the orientation of the fibers in the tow. Thus, the limitation to the alignment angle is not met. Additionally, the tow alignment angle is not subsequently met by the addition of Kochman, Kochman being silent as to fiber angle orientation in a tow, and only concerned with the fibers being woven. The Examiner has been silent as to where in either of the combined references this limitation has been met.

Additionally, McCullough fails to teach or suggest that his treatment of crimping and subsequent heating would impart this limitation to the tow. McCullough discloses at col. 6, lines 42-44 that his crimp shaping "do not apply any damaging stress, compression or other shape distortion on the fiber or fiber tow,". Thus, no interpretation can be made that the crimping imparts any fiber orientation to the tow.

Furthermore, McCullough fails to teach or suggest the limitation to "after being subjected to a predetermined stress level while simultaneously being subjected to a first predetermined elevated temperature associated with fabricating the tow,".

McCullough repeatedly teaches that his heating occurs subsequent to the crimping step (see col. 6, lines 8-9; col. 7, lines 9-13; and col. 11, lines 12-15 for example). McCullough fails to otherwise teach a simultaneous heating, thus this limitation is also not taught or suggested.

Second, the deficiencies of McCullough cannot be cured by Kochman. McCullough at col. 10, lines 35-44, discloses that his invention is directed to a tow formed of fibers for applications such as "roving, cord, rope or spun yarn. The spun yarn can be manufactured into woven or knitted cloth, carpets, blankets, and the like. Nonwoven structures can be manufactured into a wool like fluff or batting, sheeting, panel, paper and the like. A wool like fluff or batting is particularly useful as a thermal insulating material." And although McCullough discloses at col. 9, line 67 to col. 10, line 10, that the fibers are partially electrically conductive, McCullough fails to disclose a tow having a predetermined electrical resistance. Particularly, McCullough discloses the partially electrically conductive nature of his fibers so as to provide for static dissipating characteristics (see McCullough col. 10, line 2). Thus, one of ordinary skill in the art would not modify McCullough to obtain "a controlled, predetermined electrical resistance remaining substantially unchanged in response to changes in environmental conditions." as found in pending claim 1.

Kochman cannot cure the deficiencies of McCullough since Kochman is non-analogous art. For Kochman to teach the limitation to "the tow having a controlled, predetermined electrical resistance remaining substantially unchanged in response to changes in environmental conditions.", Kochman must be properly combinable with McCullough.

Kochman is directed to a heating element and method of forming a heating element whereby conductive carbon fibers of high electrical conductivity are included in a conductive yarn that is used to make heating elements (see Kochman col. 3, lines 7-22). Kochman is thus directed to carbon fiber heating elements, and McCullough is directed to carbon fiber woven cloth. One of ordinary skill in the art would not combine Kochman with McCullough to impart electrical resistance to the cloth of McCullough. Such a combination would be clearly hindsight and lacks motivation.

The case authority and the MPEP provide guidance on this point. The present rejection is a § 103 combination rejection. It is well established that a proper § 103 combination rejection requires more than just finding in the references the elements recited in the claim (but which was not done here). To reach a proper teaching of an article or process through a combination of references, there must be stated an objective motivation to combine the teachings of the references, not a hindsight rationalization in light of the disclosure of the specification being examined. MPEP 2143 and 2143.01. See also, for example, In re Fine, 5 USPQ2d 1596, 1598 (at headnote 1) (Fed.Cir. 1988), In re Laskowski, 10 USPQ2d 1397, 1398 (Fed.Cir. 1989), W.L. Gore & Associates v. Garlock, Inc., 220 USPQ 303, 311-313 (Fed. Cir. 1983), and Ex parte Levengood, 28 USPQ2d 1300 (Board of Appeals and Interferences, 1993); Ex parte Chicago Rawhide Manufacturing Co., 223 USPQ 351 (Board of Appeals 1984). As stated in In re Fine at 5 USPQ2d 1598:

"The PTO has the burden under section 103 to establish a prima facie case of obviousness. [citation omitted] It can satisfy this burden only by showing some objective teaching in the prior art or that knowledge generally available to one of ordinary skill in the art would lead that individual to combine the relevant teachings of the references."

And, at 5 USPQ2d 1600:

"One cannot use hindsight reconstruction to pick and choose among isolated disclosures in the prior art to deprecate the claimed invention."

Following this authority, the MPEP states that the examiner must provide such an objective basis for combining the teachings of the applied prior art. In constructing such rejections, MPEP 2143.01 provides specific instructions as to what must be shown in order to extract specific teachings from the individual references:

"Obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention when there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. In re Fine, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988); In re Jones, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992)."

\* \* \* \* \*

"The mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination." In re Mills, 916 F.2d 680, 16 USPQ2d 1430 (Fed. Cir. 1990)."

\* \* \* \* \*

"A statement that modifications of the prior art to meet the claimed invention would have been 'well within the ordinary skill of the art at the time the claimed invention was made' because the references relied upon teach that all aspects of the claimed invention were individually known in the art is not sufficient to establish a prima facie case of obviousness without some objective reason to combine the teachings of the references. Ex parte Levengood, 28 USPQ2d 1300 (Bd.Pat.App.& Inter. 1993)."

Here, the Examiner has not provided an objective basis for combining the teachings of the references in the manner used by this rejection, and has selected the helpful portions from each reference while ignoring the unhelpful portions. Indeed, as discussed above, the differences between the fire resistant carbon fiber tow of McCullough and carbon fiber tow used as a heating

element of Kochman preclude any objective basis for making the combination suggested by the Examiner. An objective basis is one set forth in the art or which can be established by a declaration, not one that can be developed in light of the present disclosure. The rationale urged in the explanation of the rejection is as follows:

It would have been obvious to one of ordinary skill in the art at the time the invention is made to combine the teachings of the secondary reference to Kochman et al and utilize such tow imparted with such claimed electrical resistance, in the primary reference, in the absence of unexpected results motivated by the desire to impart desired properties thereto.

This motivation is not correct, because the highly electrically conductive carbon fibers of Kochman would not be used with the fire resistant, low conductivity carbon fibers of McCullough. In addition, the Examiner's rationale is not correct because the Examiner has set forth no motivation in either McCullough or Kochman to combine the references. Applicant asks that the Examiner set forth the objective basis found in the references themselves for combining the teachings of the references.

Third, a combination of Kochman's high electrical resistive fibers with McCullough's fibers of low electrical conductivity (col. 9, line 67 to col. 10, line 1) would destroy the desired characteristic of the invention of McCullough to dissipate static charge.

Applicant notes that the following principle of law applies to all 103 rejections. MPEP 2143.01 provides "[i]f proposed modifications would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification. In re Gordon, 753 F.2d 900, 221 USPQ 125 (Fed. Cir. 1984). In this instance, an attempt to modify McCullough by Kochman would render the desired characteristic to dissipate static charge inoperative.

Thus, while McCullough teaches the inclusion of low electrical conductivity carbon fibers for strength and static dissipating characteristics, one would not modify the tow of McCullough with the tow or fibers of Kochman as stated by the Examiner to "utilize such tow imparted with such claimed electrical resistance, in the primary reference, in the absence of



unexpected results motivated by the desire to impart desired properties threto." (Examiner's rejection, paragraph 2, lines 13-16).

Dependent claims 2 and 4-7 are believed to be allowable as depending from what is believed to be allowable independent claim 1 for the reasons given above. In addition, claims 2 and 4-7 recite further limitations that distinguish over the applied art.

For example, as to claims 2 and 4, McCullough in view of Kochman make no mention of the term "alignment angle" and only mentions the term "angle" in the context of inert blown air over the fiber tow (*see* McCullough col. 7, lines 43-51). Furthermore, no teaching is present in either reference as to the predetermined stress level decreasing alignment angle within the tow. Applicant continues to respectfully disagree that the passage cited in McCullough (*see* col. 10, line 65 through col. 11, line 22; col. 13, lines 13-20) by the Examiner teaches aligning the fibers, much less teaching decreasing alignment angles or teaching specified alignment angles during a predetermined stress level. McCullough discloses at col. 6, lines 42-44 that his crimp shaping "do not apply any damaging stress, compression or other shape distortion on the fiber or fiber tow,". The Examiner further states "the secondary reference teaches this aspect throughout the reference." The Applicant fails to understand how this assertion is supported. Kochman provides no disclosure as to applying a predetermined stress level to the tow to decreasing an alignment angle of the fibers, and even more clearly, no disclosure or support can be found to decreasing the alignment angle to about ten degrees as is found in claim 4. The Examiner has provided no indication as to where this limitation is found in the references, and Applicant can find no such teaching.

As to claims 5 and 6, Applicant respectfully disagrees that the passage cited in McCullough (*see* col. 11, line 36-40 and col. 11, lines 36-60) by the Examiner teaches stabilization as recited in the claimed invention. McCullough does refer to oxidation stabilized polyacrylonitrile yarn. However, the oxidation stabilization in McCullough occurs "while the fiber is in a relaxed or unstressed state and under an inert, nonoxidizing atmosphere." *See* col. 9,

lines 9-10. Since the claim 1, from which claim 5 depends, recites the tow "being subjected to a predetermined stress level while simultaneously being subjected to a first predetermined elevated temperature associated with fabricating the tow," the term oxidized stabilization as disclosed in McCullough cannot be considered the same as the claimed invention.

Furthermore, Applicant respectfully disagrees that the passage cited in McCullough (*see* col. 11, line 36-40 and col. 11, lines 36-60) by the Examiner teaches a turbostratic orientation, and requests that the Examiner point to where this limitation is specifically found. McCullough fails to teach or disclose where the basal planes have slipped sideways relative to each other, causing the spacing between planes to be greater than ideal during in forming the tow.

As to claim 7, the Examiner has cited a passage in McCullough that indicates a range of tow resistance for a fiber construction, with the Examiner then concluding that McCullough teaches increased electrical resistance. Applicant respectfully disagrees. McCullough teaches use of four different kinds of fibers classified into four groups, from which the Examiner has merely selected a portion discussing but one of these groups. Each of the four groups of fibers differs from each other and already possesses differing amounts of electrical resistance, not the use of a single fiber construction and then increasing the electrical resistance of the single fiber construction by use of the claimed process of the present invention.

In conclusion, it is respectfully submitted that claims 1-2 and 4-7 are not rendered obvious by McCullough in view of Kochman, and are therefore allowable.

#### **B. Claims 14-17**

The Examiner rejected claims 14-17 under 35 U.S.C. 103(a) as being unpatentable over McCullough in view of Kochman.

Specifically, the Examiner stated that

The primary reference teaches the basic claimed invention including a method for making a tow of several carbon fiber members, comprising stressing carbon PAN fibers, subjecting same

to elevated temperature, adding additional types fibers thereto and blending the fibers to form a tow- col 9, line 44- col 10, line 15; col 11, lines 13-22; col 8, lines 54-68. The primary reference, however, fails to teach its tow having controlled, predetermined electrical resistance even in changed environment. The secondary reference teaches that it is known in the art to have tow material, as taught by the primary reference, have controlled, predetermined electrical resistance even in changed environments- col. 7, lines 54-65; col. 9, lines 2-9; col. 9, lines 65-67; col. 10, lines 11-18; col. 12, lines 30-32; claims 13 and 26. It would have been obvious to one of ordinary skill in the art at the time the invention is made to combine the teaching of the secondary reference to Kochman et al and utilize such tow as taught in the primary reference, imparted with such claimed electrical resistance,, in the absence of unexpected results motivated by the desire to impart desired properties thereto.

Applicants respectfully traverse the rejection of claims 14-17 under 35 U.S.C. 103(a).

The above discussion of McCullough in view of Kochman is equally applicable here, and is hereby incorporated herein.

Independent claim 14, as amended, recites a method for fabricating a tow having a controlled, predetermined electrical resistance, the steps comprising: providing a predetermined number of carbon polyacrylonitrile fibers defining a predetermined number of filaments forming a portion of a tow; stressing the predetermined number of carbon polyacrylonitrile fibers to a predetermined stress level while simultaneously subjecting the predetermined number of carbon fibers to a first predetermined elevated temperature associated with fabricating the predetermined number of carbon polyacrylonitrile fibers; subjecting the predetermined number of carbon polyacrylonitrile fibers to a second predetermined elevated temperature associated with fabricating the carbon polyacrylonitrile fibers, the second predetermined elevated temperature converting the predetermined number of carbon polyacrylonitrile fibers to carbon fibers defining a predetermined number of carbon fiber filaments; providing a predetermined number of nonconductive fibers defining a predetermined number of filaments forming a portion of a tow; and blending the predetermined number of carbon fiber filaments with the predetermined number of nonconductive fiber filaments to form a tow, the resulting tow having a controlled, predetermined electrical resistance remaining substantially unchanged in response to changes in environmental conditions. (emphasis added)

McCullough does not teach the limitation of the present invention to applying a predetermined stress at a predetermined elevated temperature, such a limitation not being met by the initial crimping of the fibers as disclosed. Further, the fibers of the claimed invention of McCullough are not stressed during the heating process as taught by McCullough, which stressing is specifically taught to be avoided to achieve the desirable properties of McCullough.

Several of the features recited by Applicant in independent claim 14 are not taught or suggested by McCullough. For reasons previously discussed for claim 1, Kochman does not cure the deficiency of McCullough. Kochman does not teach or suggest a resulting tow having a controlled, predetermined electrical resistance remaining substantially unchanged in response to changes in environmental conditions as recited by Applicant in independent claim 14.

Kochman is directed to a heating element and method of forming a heating element whereby conductive carbon fibers of high electrical conductivity are included in a conductive yarn that is used to make heating elements (see Kochman col. 3, lines 7-22). Kochman is thus directed to carbon fiber heating elements, and McCullough is directed to carbon fiber woven cloth. One of ordinary skill in the art would not combine Kochman with McCullough to impart electrical resistance to the cloth of McCullough, unless one wanted to create a heating element out of the cloth of McCullough. Such a combination would be clearly hindsight and lacks motivation.

The case authority and the MPEP provide guidance on this point and is discussed above in the argument against the rejection of claims 1, 2 and 4-7 and is incorporated into this argument against the rejection of claims 14-17.

Here, the Examiner has not provided an objective basis for combining the teachings of the references in the manner used by this rejection, and has selected the helpful portions from each reference while ignoring the unhelpful portions. Indeed, as discussed above, the differences between the fire resistant carbon fiber tow of McCullough and carbon fiber tow used as a heating

element of Kochman preclude any objective basis for making the combination suggested by the Examiner. An objective basis is one set forth in the art or which can be established by a declaration, not one that can be developed in light of the present disclosure. Applicant submits that the rationale urged in the explanation of the rejection,

It would have been obvious to one of ordinary skill in the art at the time the invention is made to combine the teachings of the secondary reference to Kochman et al and utilize such tow imparted with such claimed electrical resistance, in the primary reference, in the absence of unexpected results motivated by the desire to impart desired properties thereto.

is not correct, because neither highly electrically conductive carbon fibers of Kochman would not be used with the fire resistant carbon fibers of McCullough. In addition, the Examiner's rationale is not correct because the Examiner has set forth no motivation in either McCullough or Kochman to combine the references. Applicant asks that the Examiner set forth the objective basis found in the references themselves for combining the teachings of the references.

Applicant submits that dependent claims 15-17 are distinguishable from McCullough in view of Kochman for at least the following reasons. To begin, dependent claims 15-17 are believed to be distinguishable from McCullough in view of Kochman as depending from what is believed to be allowable independent claim 14 as discussed above. Further, Applicant respectfully disagrees with the Examiner's characterization of claims 15 and 17, as "the types of fiber filaments used during the process is of no patentable consequences which much be manipulatively distinct." Applicant's claims adding a predetermined number of non-conductive fiber filaments at claimed ratios cannot be simply dismissed by the Examiner. It is clear, that adding nonconductive fibers to a conductive tow containing conductive fibers must be of patentable consequences, as claim 14 clearly states "the resulting tow having a controlled, predetermined electrical resistance remaining substantially unchanged in response to changes in environmental conditions." (emphasis added).

Therefore, in view of the above, dependent claims 15-17 are believed to be distinguishable from McCullough in view of Kochman and therefore are not rendered obvious by McCullough in view of Kochman. In addition, claims 15 and 17 recite further limitations that

distinguish over the applied art. In conclusion, it is respectfully submitted that claims 14-17 are not rendered obvious by McCullough in view of Kochman and are therefore allowable.

### **C. Claims 8-13**

The Examiner rejected claims 8-13 under 35 U.S.C. § 103(a) as being unpatentable over Schimpf in view of Kochman.

Specifically, the Examiner stated that

The cited primary reference teaches the claimed invention including a process for a tow comprising stressing the tow, heating same at least twice- col 2, lines 54-68. The primary reference, however, fails to teach its tow having controlled, predetermined electrical resistance even in changed environment. The secondary reference, however, teaches this aspect. The secondary reference teaches that it is known in the art to have tow material, as taught by the primary reference, have controlled, predetermined electrical resistance even in changed environments- col 7, lines 54-65; col 9, lines 2-9; col 9, lines 65-67; col 10, lines 11-18; col. 12, lines 30-32; claims 13 and 26. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of the secondary reference to Kochman et al and utilize such tow as taught in the primary reference, imparted with such claimed electrical resistance,, in the absence of unexpected results motivated by the desire to impart desired properties thereto.

Applicants respectfully traverse the rejection of claims 14-17 under 35 U.S.C. § 103(a).

Schimpf, as understood, is directed to a process for producing high strength carbon fibers, in which the fibers are subjected to stretching during both stabilization and carbonization temperatures. Kochman, as understood, is directed to a process for producing a carbon fiber containing heating element.

In contrast, claim 8, as amended, recites a method for fabricating a tow, the steps comprising: providing a predetermined number of carbon precursor fibers to form a tow; stressing the tow to a predetermined stress level while simultaneously subjecting the tow to a first predetermined elevated temperature associated with fabricating the tow; and subjecting the tow to a second predetermined elevated temperature associated with fabricating the tow, the resulting tow having a controlled, predetermined electrical resistance remaining substantially unchanged in response to changes in environmental conditions. (emphasis added)

Several of the features recited by Applicant in independent claim 8 are not taught or suggested by Schimpf in view of Kochman. First, Schimpf in view of Kochman fail to teach or suggest producing a tow having a controlled, electrical resistance as recited by Applicant in independent claim 8. Schimpf is directed to the manufacture of carbon fibers having high levels of strength and stiffness, and Schimpf makes no mention of the term "electrical resistance" in the context of a resultant tow. To cure this deficiency, the Examiner attempts to modify Schimpf by Kochman to produce a tow having a controlled, electrical resistance remaining substantially unchanged in response to changes in environmental conditions.

Schimpf in view of Kochman fail to disclose the claimed invention for several reasons. First, there is no teaching or motivation in either Kochman or Schimpf to modify Schimpf to arrive at the claimed invention. Second, Kochman is non-analogous art.

The invention of Schimpf "relates to carbon fiber for use in providing structural composites containing a resinous matrix. This invention, more particularly, relates to a new carbon fiber that can impart unexpectedly high levels of both strength and stiffness to these composites." (Schimpf col. 1, lines 6-10). While Schimpf does stretch his carbon fibers during heating, such stretching is not performed such that the resulting tow having a controlled, predetermined electrical resistance remaining substantially unchanged in response to changes in environmental conditions is formed. Schimpf does not teach or suggest that the stretching or heating, or any other process step within the invention, is performed with electrical resistance of

the tow as any consideration. Furthermore, Kochman is concerned with forming a heating element. There is no motivation in Kochman to modify the structural fibers of Schimpf. The Examiner appears to be simply combining two unrelated teachings to attempt to arrive at the claimed invention. Such a combination is improper.

The present rejection clearly seeks to perform a hindsight reconstruction based upon unrelated references, which is technically unsupported and is legally improper.

The case authority and the MPEP provide guidance on this point and is discussed above in the argument against the rejection of claims 1, 2 and 4-7 and is incorporated into this argument against the rejection of claims 8-13.

Here, the Examiner has not provided an objective basis for combining the teachings of the references in the manner used by this rejection, and has selected the helpful portions from each reference while ignoring the unhelpful portions. Indeed, as discussed above, the differences between the structural carbon fibers of Schimpf and carbon fibers used as a heating element of Kochman preclude any objective basis for making the combination suggested by the Examiner. An objective basis is one set forth in the art or which can be established by a declaration, not one that can be developed in light of the present disclosure. Applicant submits that the rationale urged in the explanation of the rejection,

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of the secondary reference to Kochman et al and utilize such tow as taught in the primary reference, imparted with such claimed electrical resistance,,in the absence of unexpected results motivated by the desire to impart desired properties thereto.

is not correct, because neither highly electrically conductive carbon fibers of Kochman would not be used with the high strength carbon fibers of Schempf. In addition, the Examiner's rationale is not correct because the Examiner has set forth no motivation in either Schempf or Kochman to combine the references. Applicant asks that the Examiner set forth the objective basis found in the references themselves for combining the teachings of the references.



Thus, since Schimpf in view of Kochman does not teach or suggest all of the limitations recited in independent claim 8, Applicant respectfully submits that Schimpf in view of Kochman does not render obvious Applicant's invention as recited in independent claim 8.

Therefore, for the reasons given above, independent claim 8 is believed to be distinguishable from Schimpf in view of Kochman and therefore is not rendered obvious by Schimpf in view of Kochman.

Dependent claims 9-13 are believed to be allowable as depending from what is believed to be allowable independent claim 8 for the reasons given above. In addition, claims 9-13 recite further limitations that distinguish over the applied art.

In conclusion, it is respectfully submitted that claims 8-13 are not rendered obvious by Schimpf in view of Kochman and are therefore allowable.

### **CONCLUSION**

In view of the above, Applicant respectfully requests reconsideration of the Application and withdrawal of the outstanding rejections. As a result of the remarks presented herein, Applicant respectfully submits that claims 1-2 and 4-7 are not rendered obvious by McCullough in view of Schimpf, and that claims 14-17 are not rendered obvious by McCullough in view of Kochman, and that claims 8-13 are not rendered obvious by Schimpf in view of Kochman and thus, are in condition for allowance. As the claims are not rendered obvious in view of the applied art, Applicant requests allowance of claims 1-2 and 4-17 in a timely manner. If the Examiner believes that prosecution of this Application could be expedited by a telephone conference, the Examiner is encouraged to contact the Applicant.

The Commissioner is hereby authorized to charge any additional fees and credit any overpayments to Deposit Account No. 50-1059.

Respectfully submitted,  
**McNEES, WALLACE & NURICK**

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